Message

From: North, Alexis [North.Alexis@epa.gov]
Sent: 6/11/2019 8:22:28 PM
To: Patefield, Scott [Patefield.Scott@epa.gov]
Subject: RE: Western North Dakota Air Quality

Will you double check me to make sure I didn't do anything dangerous? My answers are below each question.

Peter,

Please see my very technical response below. I'd be happy to discuss as I know this stuff is pretty dry.

Thanks,

Alex

Alexis North, Environmental Scientist
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EPA Region 8
1595 Wynkoop Street (8ENF-AT)
Denver, CO 80202-1129
Phone: 303-312-7005
Email: north.alexis@epa.gov

From: Fritz, Pete **Ex. 6 Personal Privacy (PP)**
Sent: Tuesday, June 11, 2019 1:36 PM
To: North, Alexis <North.Alexis@epa.gov>
Subject: Re: Western North Dakota Air Quality

Thank you for the reply.

My preference is email, if possible.

Thank you,

From: North, Alexis <North.Alexis@epa.gov>
Sent: Tuesday, June 11, 2019 1:28:23 PM
To: Fritz, Peter
Subject: RE: Western North Dakota Air Quality

Hi Peter,

Thanks for your interest and email.

I have been in contact with Jim regarding his response to you. We work pretty closely with North Dakota on a number of Clean Air Act matters.

You've got a lot to discuss in your email, would you be willing to talk? There is a lot to unpack here that might do better in a phone conversation.

Feel free to give me a call at 303 312 7005 or respond with a good number for you and I'll give you a call.

Thanks,

Alex

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From: Fritz, Peter <Ex. 6 Personal Privacy (PP)
Sent: Tuesday, June 11, 2019 12:54 PM
To: North, Alexis <North.Alexis@epa.gov>
Subject: Western North Dakota Air Quality

Alexis North,

Recently, I have become concerned about air quality in Western North Dakota, particularly in Stark County. I have had many email conversations with Mr. Jim Semerad from the ND Department of Air Quality. Recently, he answered a series of questions for me, where he cited the EPA. I would like to confirm these answers with you. The original Questions and Answers are located further down in this email. Here are my concerns:

1) Mr. Semerad and the DEQ like to lump Methane, Benzene and Formaldehyde with Ozone 3 and ambient air quality. My research tells me that these are outside threats around oil and gas production. Therefore, they should be monitored independently/separately. In other words, I am okay with the Ozone 3 (ambient air) in Western North Dakota. However, I am very concerned about Methane, Benzene and Formaldehyde levels. Should I be? Shouldn't the air for these chemicals be tested and then the results given to the public?

   Background: EPA (via the Clean Air Act) does not have an ambient standard for Benzene or Methane, the only ambient (normal, background air) standards EPA has authority over in your listed pollutants is the Ozone standard (click here for website). North Dakota air monitors show attainment for Ozone (click here for website).

Short Answer: Because EPA does NOT have authority to regulate the ambient concentrations of Benzene, Methane or Formaldehyde. Thus, we don't have any ambient testing authority or standards by which to measure readings we would get.

Longer Answer: What we DO have authority is to regulate individual sources of those pollutants. We have State regulations (North Dakota Administrative Code click here) on state land, the Fort Berthold Federal Implementation Plan (FBIR FIP) on the FBIR, and New Source Performance Standards for some oil and gas well sites (there is a fairly narrow applicability for NSPS OOOOa at some facilities in North Dakota) and/or National Emission Standards for Hazardous Air Pollutants (NESHAPs) for engines that regulates Formaldehyde on both State and Reservation. Keep in mind, the NSPS and NESHAPs can require testing at the source for compliance with emissions limits. This gets pretty wonky and if you really want to dig into the federal regulations that apply to oil and gas wells, visit the NSPS OOOOa information website (click here) to see how that regulation is currently undergoing some changes which can affect how we regulate.

2) Mr. Semerad talks about an EPA QAQPS team that came to Western North Dakota in 2018. According to him, the region's air quality was deemed safe. Can I have these results with interpretation? Also, Western North Dakota is widely and commonly referred to as the "wild west"of oil and gas production due to the lack of regulation and oversight. My research also tells me that oil and gas companies will be negligent, if allowed. My research also tell me that ND allows negligence. Given this, why doesn't the EPA monitor Western North Dakota on an annual or semi-annual basis?

Background: Remember, EPA does not have an ambient standard for Benzene or Methane, the only ambient standard we have authority over is the Ozone standard (click here for website). North Dakota air monitors show attainment for Ozone (click here for website).

Short Answer1: The effort that was undertaken last summer was called GMAP (click here for a FAQ sheet) and while it did yield some data and gave us some concentrations, we found that the data really didn't mean much as we didn't have any standards by which to compare it. More than anything, it did what we were already doing which was demonstrating when oil and water storage tanks were not complying with the State Regs or the FBIR FIP.

Short Answer2: We do annual Clean Air Act inspections at well sites with North Dakota inspectors in order to enforce compliance with the States regs for oil and gas wells as well as any applicable federal regulations (NSPS OOOOa for example, if it applies). We also do CAA inspections on the FBIR with the MHA Nation to determine compliance with the FBIR FIP and NSPS OOOOa when it applies.

Short Answer3: Both EPA and North Dakota have been settling violations with companies for about the last 3 years. XTO and Slawson settlements with EPA yielded great improvements to these companies O&M programs as well as increased inspections using an infrared camera. Pleases see a couple of examples of EPA settlements for XTO (click here) and Slawson (here).

3) Mr. Semerad interpreted this Oil and Gas Threat Map located here: http://www.catf.us/wp-content/uploads/2017/02/CATF_FactSheet_HealthEffects_ND.pdf

Answer: I do agree with Jim's summary of this map. I'm not sure what data they are even using? Again, there aren't ambient standards so whatever data they are using is being measured up to an unknown standard that may or may not fit the outdoor conditions.

Do you agree with his interpretation? Why or why not?

Thank you for your time,

1) I monitor Dickinson ambient air quality hourly using Breezometer, Weatherbug and AQI. Consistently it has been above 50 ppb, which is about the same as Bismarck and Fargo. This is obviously suspicious because we are a smaller urban area. Our Ozone doesn't cost me sleep. I am concerned about Methane, Benzene and Formaldehyde concentrations. How do I get these levels tested in Dickinson. Why aren't these levels tested annually to the North and West of me. These counties are in Purple (Threat Radius Map). EPA and various groups continue to study what the "background" concentration is for ozone. Background concentrations are the result of various things including the "Mother Nature" component that I have discussed in earlier emails. In any case, due to the characteristics of ozone, similar numbers across the state are not considered "suspicious". The reason we added another monitor in the Bakken was to proactively check if problems may exist; we have been pleased that the required pollution control is working. The same pollution control that controls VOCs also works for other pollutants like methane, benzene, etc. Based on our field inspections, and then confirmed by the EPA OAQPS field testing (that I discussed in prior emails), we have seen and are seeing success in those areas as well.

2) When did the inspections take place? From my research oil and gas companies are notoriously negligent, if allowed to be. Also from my research, North Dakota allows them to be. Those inspections took place in June of 2018. ND took advantage of the opportunity to have concentrations measurements by requesting that the OAQPS team spend additional time in the Bakken; they worked long hours (10-12 hour days), 7 day weeks, and supplied extensive maps ahead of the trip to allow for

less downtime while they were here. Note that OAQPS remarked that ND was some of the most efficient testing that they've conducted (and they have been to most oil producing states in the country).

3) Doesn't the DEQ want an interpretation of the Threat Map, which is based on EPA numbers? The Threat Map you reference appears to be a map created by Ecowatch where an arbitrary ½-mile radius is drawn around each oil and gas source (oil wells, compressor stations, etc.) without regard to facility specifications, emissions, etc. This is then referred to by Ecowatch as a "health threat radius" (a term created by Ecowatch). This is a reasonable approach to determine where problems may possibly exist. The document states/confirms that potential is used in determining the "health threat radius". Therefore, this kind of document should only be used as a very first step to determine where problems may exist. Then, further studies like detailed/specific paper evaluations, review of ambient data, field inspections, and the OAQPS field measurements are used to determine if problems actually exist. Our findings have shown that we continue to achieve ambient air quality attainment, which is great news. Further, in the past several years, we have completed more compliance inspections to ensure that pollution control equipment is working as designed. However, the number of wells (and the potential of emissions) has justified increased inspectors being hired and even more inspections planned (I've pointed out in past emails that challenges still exist). We will use these resources to continue to monitor oil and gas operations, to minimize emissions, and to protect air quality in North Dakota.

Thank you,